TE/CMPN - V (CBSGS) 27/11/12
Microprocessor

Shilpa -(b) 34
Con.7602-12. **KR- 5093**

(3 Hours) **[Total Marks : 100**

N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.

1. (a) Explain the following Intel 8086 assembly language instructions giving example :– **10**
   (a) TEST
   (b) DAA
   (c) STOS
   (d) SAR
   (e) JC.
   (b) Explain the interrupt structure of the 8085 microprocessor with a neat diagram. **10**

2. (a) Explain addressing modes of 8085 microprocessor with example. **10**
   (b) Explain assembler directives of 8086. **10**

3. (a) Explain the different bus arbitration techniques with their advantages and disadvantages. **10**
   (b) Write an assembly language program for 8086 to transfer the block of 1 KB located at 0100 H to 02 00H using string instructions. **10**

4. (a) Explain the necessity of a bus controller in 8086 maximum mode operation. Also explain the 8288 bus controller in detail. **10**
   (b) What is segmented memory ? State the advantages of segmented memory with reference to the 8086 microprocessor. **10**

5. (a) Explain the concept of DMA. Show and explain an interfacing diagram of the 8086 with the 8237 DMA controller. **10**
   (b) Explain the operating modes of 8255 PPI. Also, explain the handshaking operation for input and output in mode 1. **10**

6. (a) Design an 8086 based system with the following specifications. **10**
      (i) 8086 is in minimum mode
      (ii) 64 kbyte EPROM using 52 KB devices
      (iii) 64 kbyte RAM using 32 KB devices.
   Draw the complete schematic of the design indicating address map.
   (b) Explain the operation of IC 8259 with block diagram. **10**

7. Write short notes on any **four** of the following :– **20**
   (a) RS 232 serial interface standard
   (b) Difference between memory mapped I/O and I/O mapped I/O
   (c) IEEE 488 GPIB
   (d) 8284 clock generator
   (e) String instructions in 8086
   (f) Addressing modes of 8086.

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